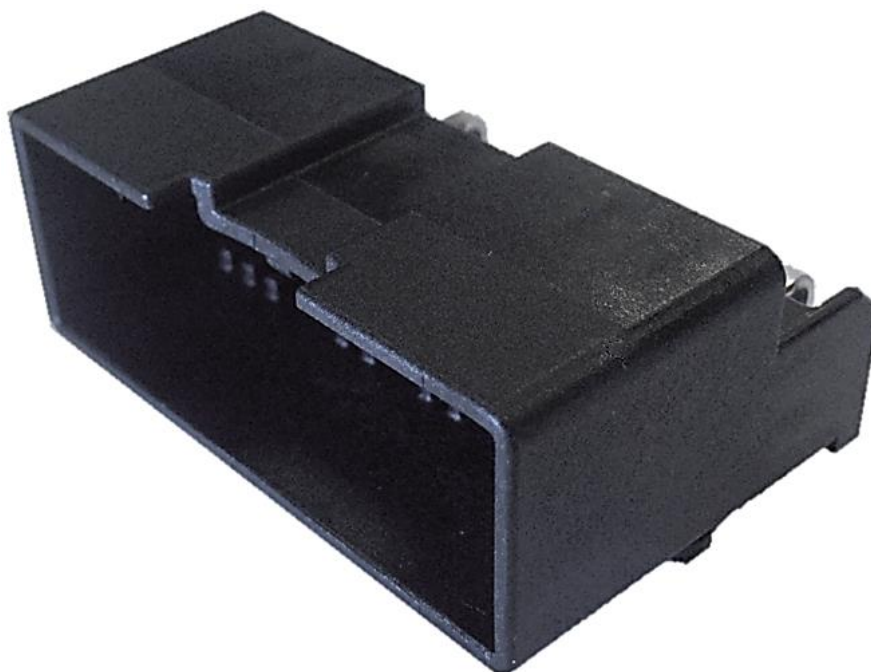




Handling Manual for Hybrid NWP System Connector 24P PCB(H) Assembly



Prepared J.Vlahovic	Sign 	Checked D.Vida	Sign 	Approved G. Gregurić	Sign 	 YAZAKI	Doc.No. YPES-15-1463E	Rev. 1
Date 29.06.2017.		Date 29.06.2017		Date 29.6.2017.				

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1 Revision list

REVISION	DESCRIPTION	NAME	DATE
0	New	J.Sostar	20.10.2014.
1	Added new part numbers, storage conditions, handling instructions, changed document form.	J.Vlahovic	14.06.2017.

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2 Product Overview

This handling manual contains the guidelines for two types of YAZAKI Hybrid NWP System Connector 24P PCB(H) Assembly. This headers are designed to apply power and signal current application. This YAZAKI headers are used for the electrical connection between the female connector and the PCB.

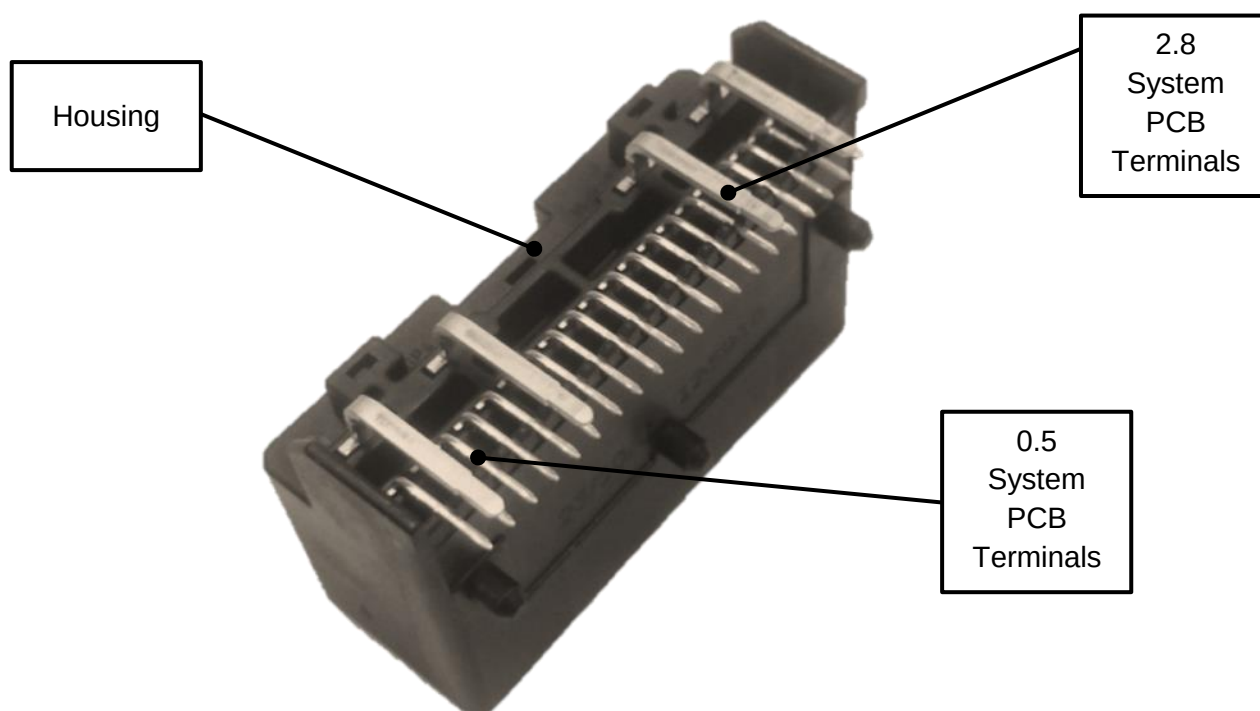
The product is assembly delivered as housing with stitched 2.8 and 0.5 System PCB Terminals.

2.1 Mechanical properties

Temperature class	T2 (-40°C to +100°C)
Vibration class	V1
Sealing class	S1 (Unsealed)

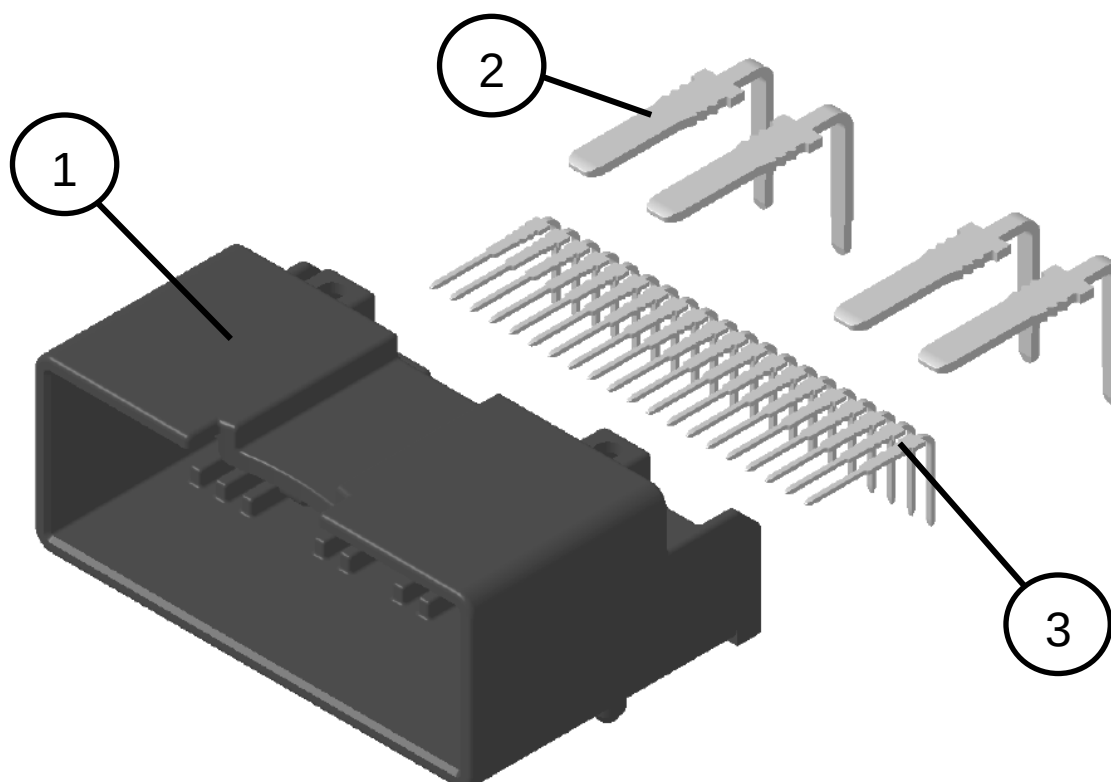
*According to USCAR-2, Rev 6, dated February 2013, and USCAR-25, Rev 3, dated March 2016

2.2 Delivery Condition



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2.3 Exploded View



2.4 Bill of Material

2.4.1 Solid boss version

NUMBER	DESCRIPTION	YAZAKI PART NUMBER	MATERIAL	COLOR/PLATING
1	Hybrid NWP System 24P PCB(H) Housing	7188-0821-30 7188-0822-40	PA6T/66-GF30FR	Black Light grey
2	2.8 System PCB Terminal	7117-5450-02	CuNiSi R580	Tin
3	0.5 System PCB Terminal	7117-5451-02	CuNiSi R580	Tin

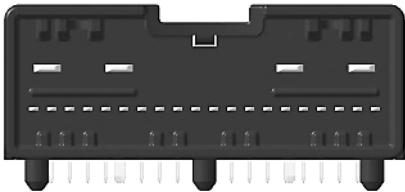
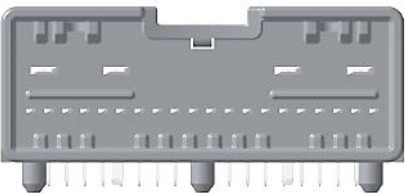
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2.4.2 Clip version

NUMBER	DESCRIPTION	YAZAKI PART NUMBER	MATERIAL	COLOR/PLATING
1	Hybrid NWP System 24P PCB(H) Housing	7188-2798-30 7188-2799-40 7188-2800-10 7188-2801-90 7188-2802-60	PA66/6T-GF16	Black Light Grey Dark Grey Blue Green
2	2.8 System PCB Terminal	7117-5450-02	CuNiSi R580	Tin
3	0.5 System PCB Terminal	7117-5451-02	CuNiSi R580	Tin

2.5 Coding

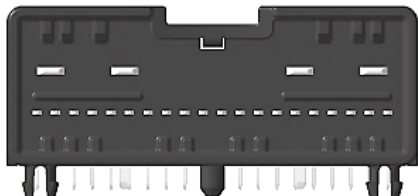
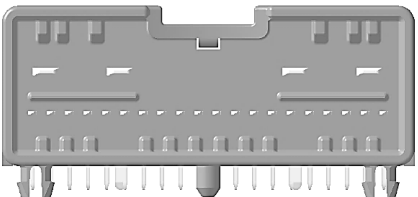
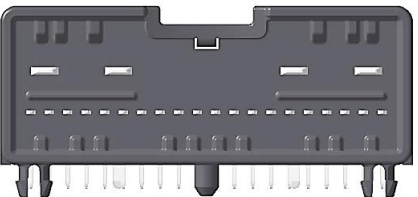
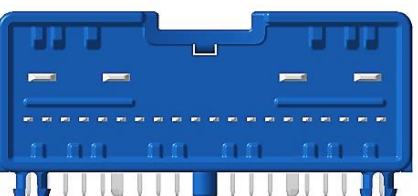
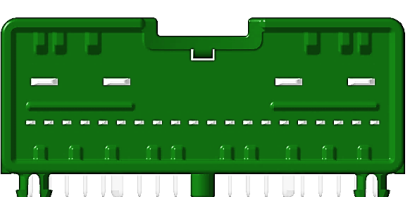
2.5.1 Solid boss version

Hybrid NWP System Connector 24P PCB(H) Assembly			
VIEW	CODE	COLOR	YAZAKI PART NUMBER
	A	Black	7388-0821-30
	B	Light Grey	7388-0822-40

For definition of Header delivery conditions as well as color marking see YAZAKI Drawing No. 7388-0821-30:R.

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2.5.2 Clip version

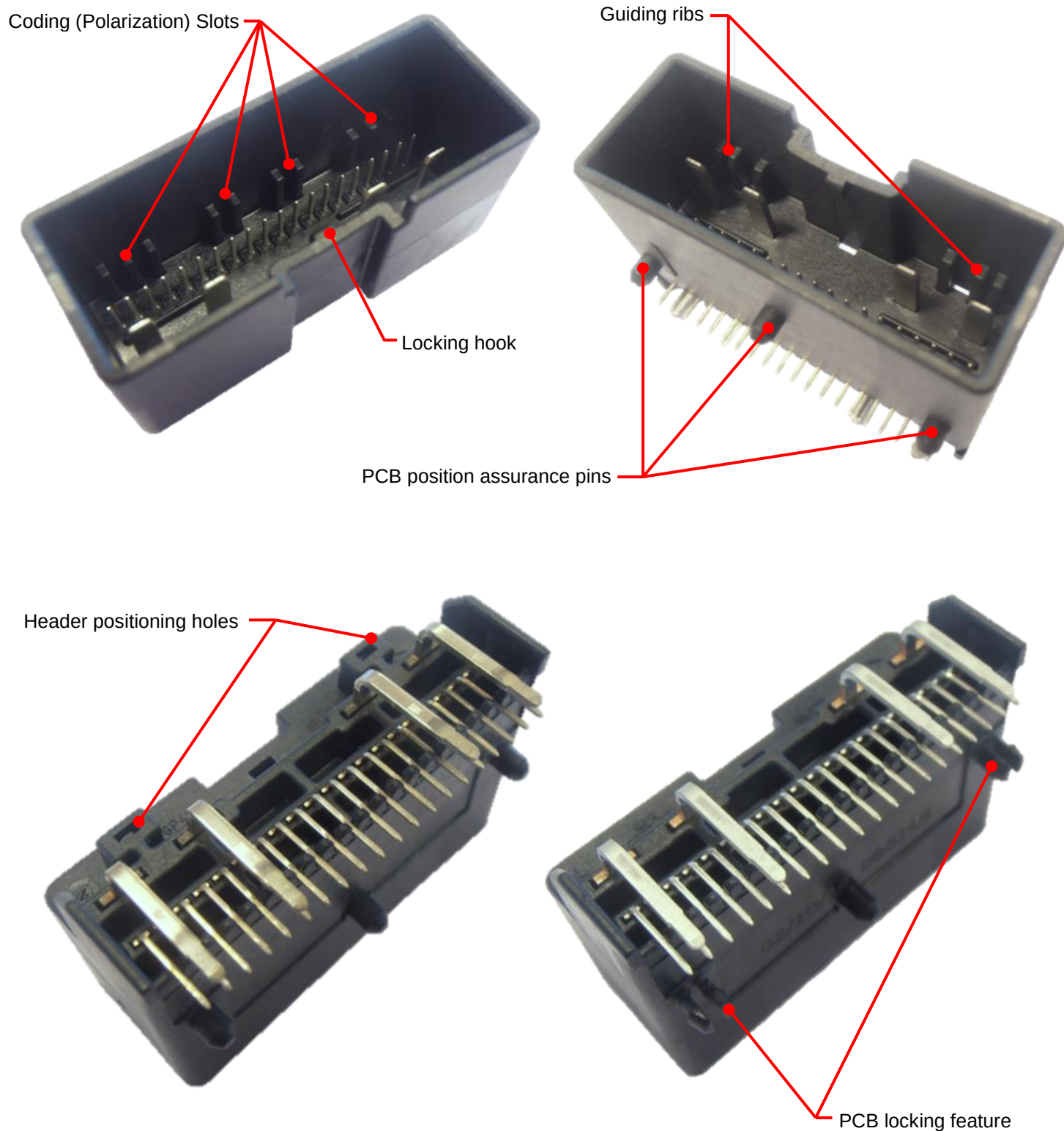
Hybrid NWP System Connector 24P PCB(H) Assembly			
VIEW	CODE	COLOR	YAZAKI PART NUMBER
	A	Black	7388-2798-30
	B	Light Grey	7388-2799-40
	C	Dark Grey	7388-2800-10
	D	Blue	7388-2801-90
	E	Green	7388-2802-60

For definition of Header delivery conditions as well as color marking see YAZAKI Drawing No. 7388-2798-30:R.

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2.6 Features and Functions of Components

2.6.1 Header Assembly



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FEATURE	DESCRIPTION / FUNCTION		
Locking hook	When Connector is fully mated, Locking Arm at Female Connector hooks on the Locking Hook of the Header. This way Connector is locked together.	7388-2798-30 etc.	7388-0821-30 etc.
Coding (polarization) slots	During mating Coding (Polarization) Ribs at the Female Connector have to get into the Coding (Polarization) Slots on the Header. It prevents miss orientation of Female Connector during mating. Also it is not possible to use Female Connector with wrong Code.		
Guiding ribs	Prevents miss orientation of Female Connector. Assure guiding between Header and Female Connector due mating process.		
PCB Position assurance pins	PCB position assurance pins enter into the holes on a PCB and guide terminals in its holes on the PCB. This will decrease possible terminal damages. Also possible forces applied on PCB are not transferred directly to the terminals. Third tab are here to ensure balance header on PCB.		
Header positioning holes	Positioning holes enable to keep header in its position by inserting additional pins.		
PCB locking feature	Feature that assure relative position between PCB and Header before soldering		

2.7 Associated Documents

2.7.1 Customer Drawings for Solid boss version

The dimensions and materials are shown in the YAZAKI Reference Drawing:

- 7388-0821-30:R.

2.7.2 Customer Drawings for Clip version

The dimensions and materials are shown in the YAZAKI Reference Drawing:

- 7388-2798-30:R.

2.7.3 Product Standard

Product Standard YPES-11-05-315E defines performance, tests and quality requirements of the Headers 7388-0821-30 and 7388-0822-40.

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3 Handling of Components

3.1 Inspection of received items

1. Appropriate part number
2. Visual check-parts must be free of foreign objects or inappropriate products
3. Parts must be free of cracks, deformation, or other other apparent abnormalities.

3.2 Header Storage and Transportation

- Ensure that the products are not subjected to any external stress or harsh impact during storage and transportation.
- The product should be stored inside, in a clear dry atmosphere, away from direct sunlight.
- Do not store them without covering with a box or plastic bag. They should be protected especially from water, oil and dust.

3.2.1 Storage Conditions for Solid boss version

Part numbers:

- 7388-0821-30
- 7388-0822-40

Material: PA6T/66-GF30FR

STORAGE CONDITIONS	
<u>SEALED BAG</u>	
Storage time	12 months
Storage temperature	+10°C to +40°C
Relative Humidity	0 to 90%

REMARK: After bag is opened, headers that will be subjected to reflow solder or other high temperature process must be mounted within 168 hours of factory conditions $\leq 30^{\circ}\text{C}/60\% \text{ RH}$ or stored per J-STD-033

REMARK: If storage time is exceed parts must be dried before soldering.

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3.2.2 Storage Conditions for Clip version

Part numbers:

- 7388-2798-30
- 7388-2799-40
- 7388-2800-10
- 7388-2801-90
- 7388-2800-60

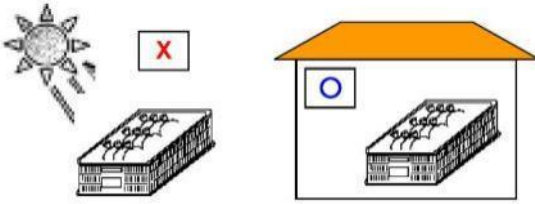
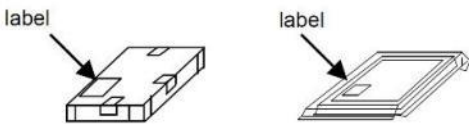
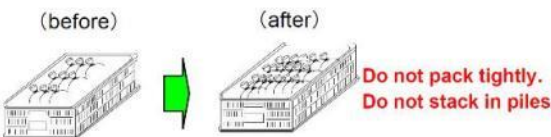
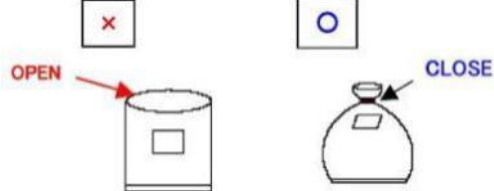
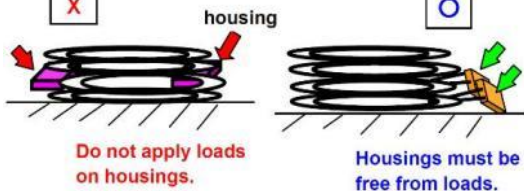
Material: PA66/6T-GF16

STORAGE CONDITIONS	
Storage time	6 months
Storage temperature	+10°C to +30°C
Relative Humidity	10 to 60%

REMARK: If storage time is exceed parts must be dried before soldering.

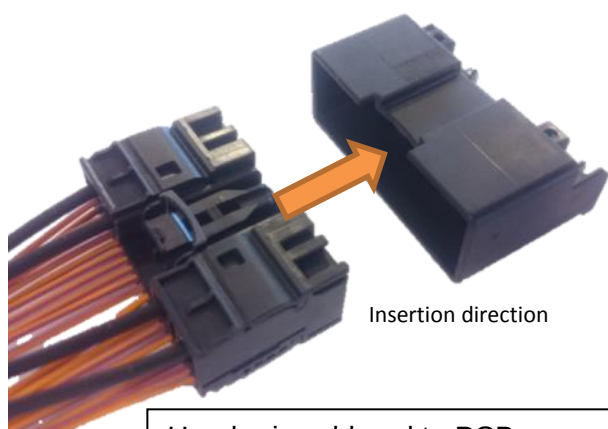
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3.3 Handling and Storage for Header

No.	CONTROL PROCESS	ILLUSTRATION	INFLUENCE ON QUALITY
1	1) Please store plastic and carton cases used for housing storage at room temperature, avoiding moisture and direct sunlight. 2) Please equalize housing temperature with room temperature.		1) There are risks of breakage and discoloration due to housing material degradation. 2) There are risks of damage on lance, hinge and breakage of lock or other problems.
2	1) Please turn the label on packages upward during storage. 2) Please do not apply pressure to housings in bag packages during storage. Please do not replace plastic cases and carton boxes with storage boxes.	 	There are risks of incorrect position of child parts, deformation or other problems.
3	When carrying housings, please pay attention in order to avoid damage or impact to the products.		There are risks of deformation, breakage, incorrect position of child parts or loss of parts.
4	Please put a cover or close the bag to prevent dust accumulation.		There is a risk of contact defect due to adherence of dust. There is also a possibility of a sealing defect.
5	When carrying housings, please hold the underside of the container with both hands. Do not position the box vertically and not push the upper side of the box.		There are risks of deformation, damage or loss of parts.
6	Please store your products in a way that does not apply a load on housings.		There are risks of deformation due to the pressure from the weight and risks of breakage due to shock.

4 Assembly on the Car Maker's Line

4.1 Mating of the Header with Female Connector

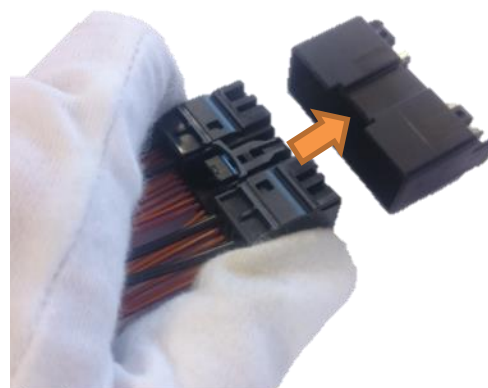


Insertion direction

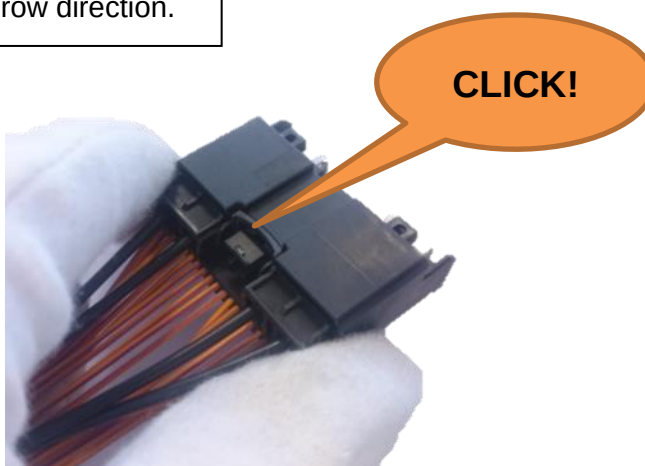
Header is soldered to PCB.

Female connector must be filled with appropriate terminals

Position the connector in-line with the Header. Then push the connector in the arrow direction.



Push the connector until an audible "CLICK" sound is heard.



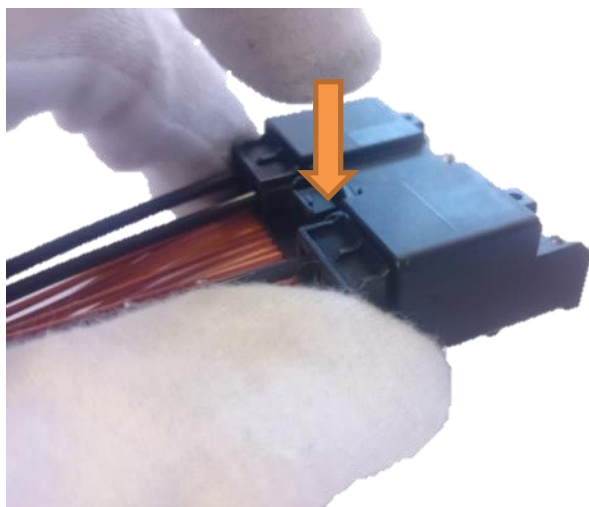
Pull the connector lightly to confirm a secure locking.

Precautions:

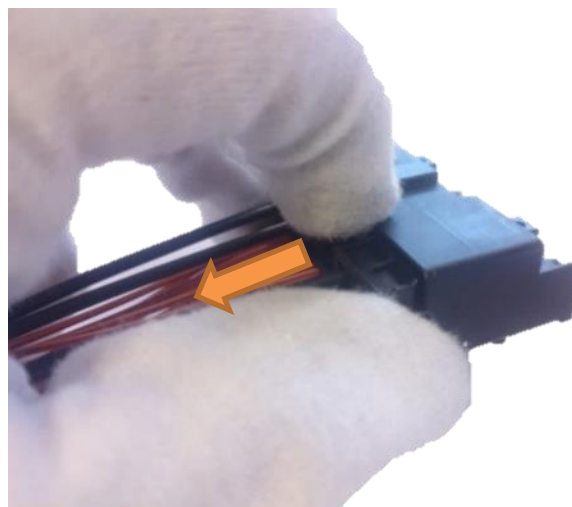
- If Connector cannot be mated smoothly, stop mating and check all included parts.
- Do not wrench when mating the connector.
- Do not mate by pushing the locking of the female connector.

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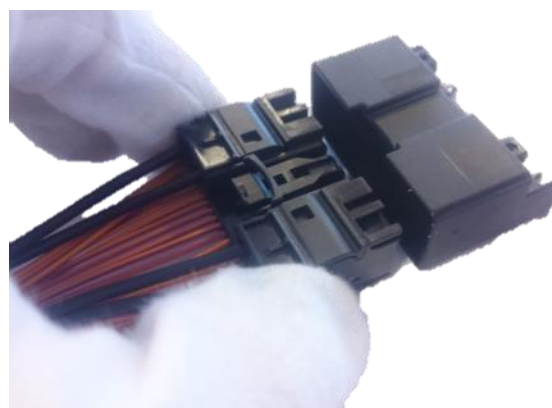
4.2 Unmating of the Female Connector from the Interface



Push the locking to disengage the housing lock.



Pull the Female connector while the lock is pressed



Precautions:

To avoid damages do not unmate Connector by pulling the wires.

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5 Service

5.1 Serviceable parts

There are no serviceable parts on the Header.

6 PCB Thickness and Soldering Temperature

Thickness of the PCB which should be used is 1.6 mm.

Soldering process to be applied is Reflow soldering at the peak temperature of 260°C.

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